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**NAVAL PERSONNEL AND TRAINING
RESEARCH LABORATORY
SAN DIEGO, CALIFORNIA 92152**

RESEARCH REPORT SRR 71-1

JULY 1970

**A COMPARATIVE EVALUATION OF GROUP IV PERSONNEL ASSIGNED
TO THE USS CATSKILL: FOLLOW-UP PERFORMANCE EVALUATION**

Nicholas H. Van Matre
Robert J. Harrigan

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TO THE USS CATSKILL: FOLLOW-UP PERFORMANCE EVALUATION

by

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SUMMARY AND CONCLUSIONS

Problem

This investigation was conducted to assess the performance capabilities of Mental Group IV personnel (AFQT scores 10 through 30) assigned to an operational Navy vessel. This report presents information concerning the shipboard performance of Group IV personnel in comparison with a matched sample of non-Group IV men assigned to the mine countermeasures support ship USS CATSKILL.

Background

In an effort to provide the Navy with summary information concerning the utilization of Group IV personnel, an earlier study was conducted assessing the aptitudes, training achievement, and shipboard performance of the Group IV men during their first four months aboard the CATSKILL. The present report presents a further evaluation of comparison samples of Group IV and non-Group IV personnel after they had experienced an additional ten months of duty aboard the CATSKILL.

Approach

The research procedures involved a shipboard performance assessment of men in the original Group IV and non-Group IV samples who were still assigned to the CATSKILL at the time of this second evaluation. Research data were obtained from service records, actual performance tests, written tests, and supervisor's ratings.

Conclusions

The following conclusions are based upon comparisons made between the shipboard performance of the samples of Group IV and non-Group IV personnel. Results from the actual performance tests indicated no significant difference between samples in test task proficiency. The Group IV men did score lower on a written General Navy Knowledge Test and were rated lower than the non-Group IV personnel on two different supervisors' rating scales. Comparisons of personnel records revealed that the Group IV personnel experienced more disciplinary actions, completed fewer training courses, and advanced in pay grade at a slower rate than did the non-Group IV men. In general the outcomes of this study substantiate the trends reported in the initial CATSKILL evaluation. Considerations regarding the feasibility of shipboard utilization of Group IV personnel are presented in the report.

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A COMPARATIVE EVALUATION OF GROUP IV PERSONNEL ASSIGNED TO THE USS CATSKILL: FOLLOW-UP PERFORMANCE EVALUATION

A. Introduction

Since the revision of Armed Forces induction standards, the Navy has engaged in research efforts designed to determine the most appropriate means of developing and utilizing the lower aptitude personnel who would not have been eligible for induction under previous standards. The present investigation is intended to determine the extent to which Group IV personnel (AFQT scores from 10 through 30) can be successfully assimilated into the normal evolutions of an operational Navy vessel. The recommissioning of the mine countermeasures support ship USS CATSKILL, and its subsequent crew assignment, afforded a uniquely appropriate opportunity to evaluate the shipboard performance of a large sample of Group IV men in comparison with a matched sample of non-Group IV men serving on the same vessel.

An initial CATSKILL report (1) presented the aptitudinal characteristics, training achievement, and shipboard performance ratings of samples of Group IV and non-Group IV subjects after the men had experienced only four months of fleet duty aboard the CATSKILL. In general, results revealed that the Group IV sample had lower aptitude test scores, received lower training course grades and were rated lower on Enlisted Performance Records than the non-Group IV personnel.

The present report describes the comparisons made between the same research samples, after the crew had served a total of 14 months of shipboard duty, immediately prior to a West-Pacific cruise. The evaluations attempted to specify the proficiency level at which the Group IV personnel performed certain shipboard duties in comparison to the performance of the non-Group IV sample. In addition, comparisons of certain gross measures of adjustment to the Navy environment were made so that a meaningful overview of Group IV behavior could be presented. A mailout questionnaire was used to elicit information concerning those subjects who had been transferred from the CATSKILL to another duty station prior to the follow-up evaluations.

B. Research Procedures

1. Methodology

Written and actual performance tests were administered aboard ship to the Group IV and non-Group IV samples after the crew had experienced 14 months of duty aboard the CATSKILL. The evaluation team was composed of two test administrators and three technically qualified training specialists. During the evaluation period, pertinent personnel data were obtained from the ship's diary and individual service records. Job performance ratings were obtained from supervisory and administrative personnel.

Specific job performance tests were developed and administered to the subjects in three of the ship's 19 divisions. The subjects assigned to the Deck Force, Boat Group, and Engineering Division were selected for assessment with these performance tests, since those three divisions utilized 72% of the on-board Group IV subjects. The remaining 28% of the Group IV men had been assigned in small groups to the other 16 divisions.

The performance tests were designed to measure the critical job elements which are essential to accomplishment of assigned shipboard tasks. Since the tasks performed within any one Division involve a variety of skills, no single job assessment would provide an adequate measure of total job performance. Hence, two actual performance tests and a written test, were utilized for evaluation of job proficiency within each of the three Divisions. In some instances, a sufficient commonality of job requirements existed across Divisions permitting administration of the same test to personnel in more than one Division. The job elements incorporated in the tests were selected as representative of the types of tasks frequently performed by non-rated personnel in those Divisions. A full description of the tests and questionnaires given to personnel from each Division is presented in a following section.

Performance rating data were obtained from subjects that had been transferred from the CATSKILL by mailing a performance rating questionnaire to each man's supervisor at his new duty station. Items on the mailed questionnaire duplicated those on the questionnaire completed by the supervisors of subjects remaining aboard the CATSKILL.

2. Subjects

The research population in the initial CATSKILL investigation was composed of a sample of 116 Group IV men, (AFQT scores 10 through 30), and a comparison sample of 82 non-Group IV personnel (AFQT scores above 30). These 198 men were selected from the total of 270 non-rated men who had been originally assigned to the CATSKILL. The personnel not included in the samples were those with atypical work assignments (e.g. stewards) and those whose age or time in the service exceeded research limits which were established to equate the two samples as nearly as possible. The research limits excluded from consideration those individuals who had more than 18 months in the service or who were more than 24 years of age at the time of assignment to the CATSKILL. At the time of the follow-up evaluation, slightly more than 40% of the original samples still remained aboard the CATSKILL. A detailed breakdown of the distribution of the initial samples is contained in the Results Section.

3. Data Sources

Varieties of data sources were tapped to provide a comprehensive overview of Group IV capabilities. Assessments of several facets

of both work performance and behavioral adjustment were made in order to yield a meaningful analysis of Group IV job proficiency. Each of the various data sources is described in the following paragraphs.

a. Written Performance Tests. Written performance tests were developed and administered to the subjects in the Engineering (B) Division, Deck Force (First) Division, and Boat Group Division. These three divisions comprised 72% of all Group IV subjects remaining aboard ship.

A 35-item multiple-choice, general Navy Knowledge Test was given to all subjects in the three Divisions.¹ Items on this test were designed to assess a man's knowledge of parts of ships, Navy protocol, ranks/rates, shipboard chain of command, and other general aspects of life aboard a Navy vessel.

In addition to the general Navy Knowledge Test, the subjects in each of the three Divisions completed a 15-item multiple-choice test designed to assess knowledge of specific tasks, equipment, or work procedures unique to the job assignments for that Division. For the B Division, written items pertained to boiler and engine room operations and equipment. The First Division test items were concerned with deck operations, line handling tasks, and nomenclature of equipment utilized during deck force job assignments. Boat Group Division test items were related to small boat job assignments and maintenance, and right-of-way rules for small boat operation.

b. Actual Performance Tests. Actual performance tests were developed and administered to the same subjects who took the written tests. The four different performance tests developed for evaluating skills in the three Divisions are described in the following paragraphs.

(1) Dial and Gauge Reading Test. The Dial and Gauge Test consisted of a simulated control panel supporting eleven actual dials and gauges which were to be read by each subject. Subjects from the B Division were asked to record as accurately as possible the eleven possible gauge readings. Each man's score consisted of the number of correctly recorded dial readings.

(2) Knot Tying Test. The Knot Tying Test required each man to tie six knots which are frequently used in deck force and small boat operations. A piece of line was provided and each subject was asked to tie a square knot, bowline, figure eight, single becket, clove hitch, and two lines to the same cleat. The test score consisted of the total number of knots tied correctly. This test was taken by men in both the First and Boat Group Divisions.

¹Copies of this and the other written tests are available on request.

(3) Compass and Relative Bearing Test. The Compass and Relative Bearing Test required each man to make 5 compass readings and determine 5 relative bearings. A compass and sea map were provided with 5 points specified on the map as target objects for the relative bearing computations. This test was administered to subjects from the Boat Group and First Divisions. The total number of correct responses constituted the final test score.

(4) Sound-Powered Phone Test. This test evaluated the level of proficiency of utilization of a sound-powered telephone, similar to the standard system wired throughout the various compartments of a Navy ship. Each subject's ability to use the sound-powered phone was determined by participation in a four transmission conversation using a two-station system with a subject at one station and a test administrator at the other phone. The transmissions required the subject to send a message, receive a message, answer a question, and use proper procedure for requesting a "repeat" of a message. Each man was given cards which provided the necessary content information for the transmissions; however, the test required that subjects follow the correct operating procedures to utilize the information appropriately.

For scoring purposes phone usage was divided into three areas: putting on phones, telephone operating procedures, and securing phones. Each facet of phone usage was further broken into small procedural elements in order to arrive at a test score. For example, in the "putting on phones" area, each subject was graded as to whether he: cleared the neckstrap, placed strap around neck, removed receiver from transmitter yoke, placed phone squarely over ears, tested phones, used both hands to connect phone to jackbox, and identified himself as being on the phone station. The test scoring form in Appendix A provides details of other phone usage areas. For each procedural element the subject received one point for a correct response, with the final test score consisting of the total number of correct responses out of the 43 possible response items.

c. General Performance Rating Questionnaire. The supervisor of each research subject was asked to complete a five-item rating questionnaire comparing the man's job performance, watch standing ability, attitudes, and adaptation to Navy life and responsibilities with those of men with similar pay grade and length of elapsed service time. The items were of a general nature in order that comparisons of responses across the different ratings would have equivalent meaningfulness. Since a number of men from both samples had been transferred from the CATSKILL, the same questionnaire was mailed to their new duty station with instructions for their current supervisor to complete the form. At no time during the survey were the supervisors informed that the men to be rated were either Group IV or non-Group IV men. A copy of the questionnaire is included as Appendix B.

d. Personnel Records. The service record for each subject was consulted for changes in rate, administrative actions, and Enlisted

Performance Record results. Rate changes, transfers, discharges, and punitive actions were verified in the ship's diary. A listing of enlisted personnel by billet numbers was the source of shipboard divisional assignments for all subjects.

C. Results

During the interval of 10 months between the initial investigation and the present follow-up performance assessment, numerous transfers, discharges, and other administrative actions occurred which affected the size of both samples. Table 1 presents a breakdown of the distributions of the two original samples according to the number of men from each sample remaining on-board the CATSKILL, transferred to other duty stations, discharged from the Navy or transferred to a hospital for further assignment.

Table 1
Distribution of Research Subjects at Time of
Follow-Up Assessment

	Group IV		non-Group IV	
	(N)	(%)	(N)	(%)
On-board CATSKILL*	47	41%	35	43%
Transferred to other duty stations	49	42%	40	49%
Discharged from Navy	15	13%	6	7%
Transferred to Hospital	5	4%	1	1%
Totals of subjects in original samples.	116	100%	82	100%

*Note--Includes 6 Group IV and 16 non-Group IV men who were not available for testing during the evaluation period.

From Table 1 it is apparent that similar percentages (41% and 43%) of subjects from both of the original samples were still assigned to the CATSKILL at the time of the follow-up assessment. There was a difference between samples in the percentages of the subjects that had received an administrative discharge as "undesirable", with 13%

of the Group IV sample having been discharged as opposed to 7% of the non-Group IV subjects. Of the subjects on-board the CATSKILL at evaluation time, 41 Group IV and 19 non-Group IV men were available for performance testing and/or rating by their supervisors. Of those subjects that had been transferred from the CATSKILL to other duty stations, performance rating data were obtained via a mailout questionnaire for 15 Group IV and 10 non-Group IV men. Operational commitments prevented some subjects from completing all tests, resulting in variations in sample size for the assessment data from the different evaluative measures.

1. Written Performance Tests. The 35-item general Navy Knowledge Test was administered to available subjects in the three assessed Divisions at the time of the follow-up assessment. The Group IV sample had an average score of 25.6 (N=34), while the non-Group IV sample (N=18) obtained an average score of 28.7 correct items. A t-test for determining the significance of the difference between means indicated the non-Group IV mean to be significantly higher at the .005 level ($t=3.06$, $df=50$). Although the non-Group IV sample had a significantly higher average score, the score distributions for the two groups had considerable overlap, with standard deviations of 3.7 for the Group IV and 2.6 for the non-Group IV sample.

The subjects in the First, B, and Boat Group Divisions also completed a 15-item written test assessing some of the specific skills associated with their Divisional assignment. Average scores and the number of subjects in each Division taking the tests are presented in Table 2. Significance tests were not computed on the data due to the small sample sizes, although it is apparent that the non-Group IV average scores are numerically higher on all three tests.

Table 2
Comparison of Written Divisional Skill Test Scores for
Group IV and non-Group IV Samples

Division	Group IV Mean Score (N)	non-Group IV Mean Score (N)
First (Deck Force)	8.0 (10)	10.0 (2)
B (Engineering)	10.3 (12)	12.3 (7)
Boat Group	8.0 (12)	9.5 (9)

2. Actual Performance Tests. Table 3 presents the mean performance scores and the results of tests of significance computed for all four performance tests, although the sample size for the Dial and Gauge Reading Test is relatively small.

There was no significant difference between the Group IV and non-Group IV average scores for any of the four tests analyzed by means of the t-test. This absence of a significant difference on the actual performance tests, as opposed to significantly lower Group IV scores on the 35-item written Navy Knowledge Test may be indicative of the relatively inferior ability of the Group IV personnel to take written examinations. In the Dial and Gauge Reading Test both groups of subjects scored poorly, although the eleven dial readings making up the test were considered a fair selection of readings taken from common gauges and dials found in the boiler and engine rooms of any Navy vessel. The Knot Tying Test results were surprisingly consistent. Almost all subjects were capable of tying the square knot, bowline and figure eight knot, while the more difficult, and less frequently used, single becket and clove hitch knots, and two-line cleating proved beyond the abilities of most subjects. In the Compass and Relative Bearing Test all but one non-Group IV and two Group IV men correctly read all five compass readings. The variations in the test scores came almost entirely from the subjects' arriving at incorrect relative bearing figures. There was no significant difference between the average scores for the Group IV and non-Group IV subjects on the Sound-Powered Phone Test. Of the subjects tested, 56% of the Group IV and 57% of the non-Group IV subjects had been assigned duties on the CATSKILL which required the use of a sound-powered phone. Only two Group IV and one non-Group IV man had not attended a sound-powered phone talking course.

3. General Performance Rating Questionnaire. The supervisor of each man was asked to complete a five-item rating questionnaire comparing that subject's abilities with the abilities of men with equivalent pay grade and service time. The ratings were based on approximately a 10-month period of supervision. For each item five response choices were available to rate ability ranging from "well below average" to "much better" than that of men of equivalent pay grade. To facilitate data analysis, each response was assigned a value from 1 to 5, in order of increasing favorableness. The response values were averaged for each sample to obtain a mean response score.

Table 4 presents the average response values for the five questionnaire items obtained from the shipboard and mailout questionnaire, along with results from t-tests performed to determine whether a statistically significant difference existed between the average ratings of the two samples.

From Table 4 it is apparent that the non-Group IV men as a group were rated higher on all five of the rating items. It should be pointed out that with standard deviations of approximately 1.0, there is a large amount of overlap in the ratings between groups. Since

Table 3
 Results of Actual Performance Tests
 for the Group IV and non-Group IV Samples

Test (Divisions Taking Test)	Possible Score	Group IV		non-Group IV		Significance Test Results		
		Mean Score	(N)	(S.D.)	Mean Score		(N)	(S.D.)
Dial and Gauge Reading Test (B div.)	11	5.4	(12)	(2.4)	6.9	(7)	(2.1)	t=1.25 df=17 Not significant
Knot Tying Test (First and Boat Group div.)	6	3.4	(22)	(1.8)	3.5	(11)	(1.2)	t=0 df=31 Not significant
Compass and Relative Bearing Test (First and Boat Group)	10	7.4	(22)	(1.4)	8.2	(11)	(1.0)	t=1.61 df=31 Not significant
Sound-Powered Phone Test (First, B, and Boat Group)	43	30.2	(37)	(5.3)	31.3	(18)	(5.3)	t=.681 df=53 Not significant

Table 4

Comparison of Supervisors' Ratings of Group IV and non-Group IV General Performance

Questionnaire Item	Group IV		non-Group IV		Significance Test Results
	Average Response	(N) (S.D.)	Average Response	(N) (S.D.)	
Ability to perform normal watchstanding duties.	3.6	(57) (0.9)	3.9	(45) (0.9)	t=2.87 df=100 Significant at .01
Ability to perform tasks connected with his specialty rating.	3.5	(56) (1.1)	3.9	(45) (0.9)	t=2.43 df=99 Significant at .05
Attitude during General Quarters conditions.	3.6	(53) (0.9)	3.9	(42) (0.8)	t=2.33 df=93 Significant at .05
General adaptation to Navy life and responsibilities.	3.5	(57) (1.1)	3.9	(45) (0.8)	t=2.23 df=100 Significant at .05
Ability to perform messenger watch duties.	3.6	(47) (0.9)	4.2	(31) (0.8)	t=3.52 df=76 Significant at .01

Response Value Response

- 1 = "well below average"
- 2 = "below average"
- 3 = "about the same"
- 4 = "better than average"
- 5 = "much better than average"

the lowest average rating for either group was 3.5, it is also apparent that abilities and attitudes of subjects in both groups were generally considered slightly better than average.

4. Personnel Records. Information was obtained from the service records of both Group IV and non-Group IV subjects who were still assigned to the CATSKILL at the time of the follow-up evaluation. Some of the subjects who had been transferred from the CATSKILL provided additional data by means of the mailout questionnaire.

The pay grade of each man was recorded at the time of the initial assessment and during the present evaluation. Figure 1 shows the proportions of the present samples at each pay grade at the time of both the initial and follow-up evaluations. The proportions are based on data from those subjects remaining aboard the CATSKILL at the time of the follow-up evaluation plus data from the mailout questionnaire (Group IV N=62, non-Group IV N=45). A large majority of both of these samples (89% of the Group IV and 71% of the non-Group IV men) were at the E-3 (Seaman) pay grade during the initial assessment. During the following ten months most of the subjects had more than one opportunity to take the advancement-in-rating examination. Figure 1 shows that at the time of the follow-up evaluation 82% of the Group IV sample was still at the E-3 pay grade, while only 22% of the non-Group IV sample remained at that pay level. The percent of non-Group IV men at the E-4 pay grade increased from 25% to 60% from the initial to the present evaluation, while the Group IV sample changed from 0% to 15% in that pay grade. Apparently, substantial proportions of both samples initially attained the E-3 pay grade, but the Group IV men experienced relatively greater difficulty than the non-Group IV's in advancing beyond the E-3 level to a higher grade. None of the Group IV men advanced beyond the E-4 level during the interval between the initial and the follow-up evaluations, while eight (18%) of the non-Group IV men advanced to the E-5 level during this period.

The Enlisted Performance Records of the research subjects remaining aboard the CATSKILL were examined in order to determine what official ratings of the man had been recorded for such factors as: professional performance, military behavior, military appearance, and adaptability. Each man is rated on each of these factors with a four-point scale by his supervisor approximately every six months. These ratings are permanently recorded in the man's service record and reflect, in general, how the man is performing at his duty station. The most recent rating listed in each man's record was used for data analysis purposes.

Table 5 presents the average ratings, standard deviations, and significance test results for four of the five rating scales included in the Enlisted Performance Records. The fifth scale (leadership and supervisory ability) was omitted from the table since it applies only to third-class petty officers and above, resulting in an insufficient number of Group IV ratings for data analysis purposes.

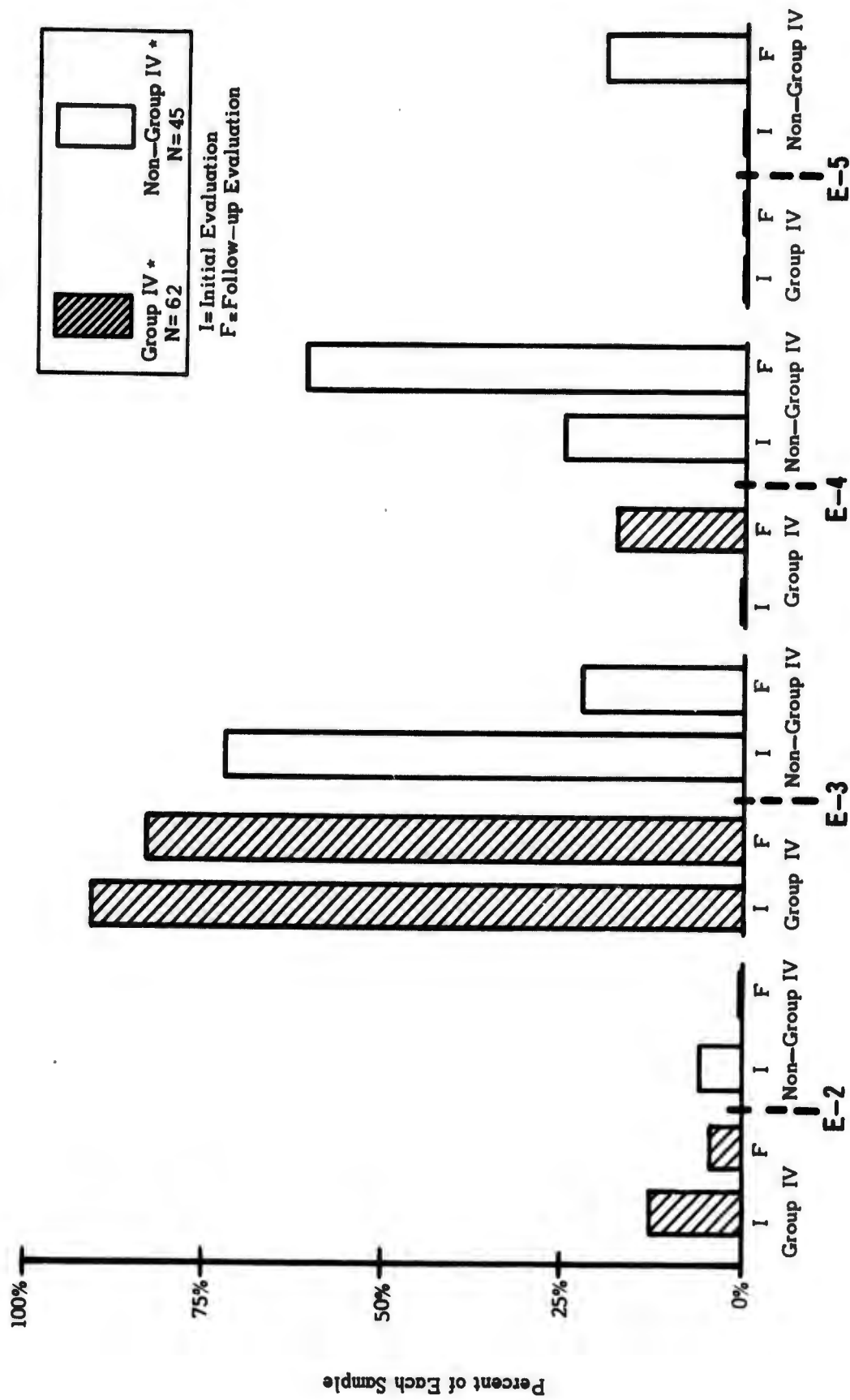


FIGURE 1 PROPORTION OF SAMPLE IN EACH PAY GRADE AT TIME OF INITIAL AND FOLLOW-UP EVALUATIONS.

* Samples comprise subjects in initial evaluation who were either still on board, or were assessed by mailout questionnaire in follow-up evaluation..

Table 5
 Enlisted Performance Record Data for Group IV
 and Non-Group IV Samples*

Rating Scale	Group IV Mean Rating (N)	(S.D.)	non-Group IV Mean Rating (N)	(S.D.)	Significance test results
Professional Performance	3.3** (45)	(.4)	3.6 (35)	(.2)	t=4.03 Significant at .01
Military Behavior	3.4 (45)	(.4)	3.6 (35)	(.2)	t=3.18 Significant at .01
Military Appearance	3.3 (45)	(.3)	3.6 (35)	(.2)	t=3.82 Significant at .01
Adaptability	3.5 (45)	(.3)	3.7 (35)	(.2)	t=2.70 Significant at .01

*Samples include only those subjects assigned to the CATSKILL at the time of the follow-up evaluation. Data was not available for two of the 47 Group IV men still assigned to the ship.

**Ratings are rounded to the nearest tenth.

Results of t-tests for significant differences between means revealed that the non-Group IV sample, on the average, was rated significantly higher (better) than the Group IV sample on all four scales. Although the statistical tests showed that the Group IV sample, as a whole, had been rated lower by their supervisors, it should be noted that the lowest average rating was 3.3 on the Navy's 4.0 scale. The higher average Enlisted Performance Record ratings obtained by the non-Group IV sample in this follow-up evaluation are consistent with higher mean ratings obtained some 10 months earlier in the initial evaluation.

The number of additional package training courses successfully completed by each subject were recorded from the service records of those subjects still assigned to the CATSKILL during the follow-up evaluation. Only those courses taken during the 10 months between assessments were considered for data analysis purposes. While eight men (23%) of the 35 non-Group IV subjects completed one or two courses, only three men (6%) of the 47 Group IV subjects completed one or more courses during the 10-month period. This is not surprising since students for most training courses are selected on the basis of GCT, ARI, and other aptitude test scores.

It was reported in the earlier evaluation that the Group IV sample had tended to experience more discipline problems, according to service records. For the follow-up assessment all additional service record entries of discipline problems were tabulated for subjects in both groups. Twelve men (25%) of the Group IV subjects had one or more entries in their service records concerning additional discipline problems since the initial evaluation, while only one (3%) of the non-Group IV subjects had experienced administrative action regarding discipline problems. The specific types of problems tended to be unauthorized absences, letters of indebtedness, and drunkenness.

A record was made of the initial and any subsequent divisional assignments for each man. Of the 35 non-Group IV subjects, only two men changed divisional assignments during the 10 months. Both of these men were reassigned to other Divisions requiring some technical ability to perform assigned duties (e.g., reassignment from the "B" Engineering Division to another Engineering Division). Of 47 Group IV men, 15 received divisional reassignment, with six of these having been reassigned to a Service Division. The Service Divisions frequently utilize the non-rated men in the performance of manual labor necessary for the operation of the ship's laundry and kitchen, and disbursement of ship's supplies. The other 9 Group IV men were reassigned to other divisions which do require some degree of technical competence for the successful completion of assigned tasks.

D. Summary and Conclusions

A follow-up performance evaluation was conducted on samples of Group IV and non-Group IV personnel with about 14 months of experience aboard the mine countermeasures support ship USS CATSKILL. The assessment sources included written and actual performance tests,

supervisors' ratings, and summarized data obtained from personnel records. Discharges and transfers reduced the size of the samples available for shipboard evaluation, although more than 40% of the subjects from the original research samples remained aboard the CATSKILL at the time of the follow-up assessment. Some subjects who had been transferred to other duty stations were evaluated by means of a mailout questionnaire completed by their new supervisors.

Analysis of the assessment data showed that the Group IV personnel scored lower on the written Navy Knowledge Test than did the non-Group IV sample but there was no significant difference between samples in the average scores obtained on the actual performance tests. Both samples performed relatively poorly on the Dial and Gauge Reading Test and on the relative bearing portion of the Compass Test. Results from the Knot Tying Test indicated that both Group IV and non-Group IV men in the Deck Force and Boat Group Divisions were capable of tying the simple knots, but were generally not able to tie the more difficult knots. The two research samples also performed comparably on the Sound-Powered Phone Talking Test. On a general performance rating questionnaire, the Group IV men were rated significantly lower than non-Group IV men by their supervisors on ability to perform watchstanding duties, specialty rating tasks, General Quarters attitudes, and on adaptation to Navy life. However, mean supervisor ratings indicated slightly above average performance for both samples on all factors.

A comparison of the rating results from Enlisted Performance Records showed that the non-Group IV sample was rated significantly higher on professional performance, military appearance, military behavior, and adaptability. Again average ratings on all factors were at an acceptable level for both samples.

Further comparisons of personnel records revealed that 23% of the on-board non-Group IV sample had taken one or more package training courses during the 10-month interval, while only 6% of the on-board Group IV sample took any additional training courses.

For the 10-month period prior to the follow-up assessment disciplinary actions were recorded in the service record for only one (3%) of the non-Group IV subjects, as opposed to 12 (25%) of the Group IV men.

Advancement-in-rate data indicated that non-Group IV personnel advanced through pay grades more rapidly and to a higher level than did Group IV men. Of 62 Group IV men, 82%, as compared with 22% of the 45 non-Group IV men, were still at the E-3 level at the time of the follow-up evaluation. The E-5 pay grade was attained by 18% of the non-Group IV sample, while none of the Group IV men achieved that level. The slower advancement of Group IV men may be partially attributed to their general lack of facility on written examinations.

In general the research evidence of the present study indicates that the Group IV man is moderately successful in coping with the shipboard assignments typically given to non-rated seamen. Group IV men may perform comparably to non-Group IV's on actual performance tasks, but are perceived poorer in ability and attitudes by supervisors, they experience more disciplinary actions, and they have greater difficulty advancing in rate.

The overall outcomes of this study generally substantiate the trends indicated by the results of the initial CATSKILL evaluation. Since Group IV personnel can adequately perform most lower-level shipboard assignments, they may feasibly be utilized in this capacity if optimal utilization and development of marginal personnel is the guiding policy concern. However, if personnel costs and efficiency are of primary concern, shipboard utilization of Group IV's may be less justified since evidence shows that the average performance of non-Group IV men is equal to or better than that of Group IV personnel on all assessed task variables.

Appendix A

Name _____ Rate _____ Division _____

SOUND-POWERED TELEPHONE TEST SCORING FORM

Putting on phones:

Yes (1)
No (0)

- 1. Clear neckstrap _____
- 2. Place phone around neck _____
- 3. Removes receiver from transmitter yoke _____
- 4. Places headset squarely over ears (adjust headband if necessary) _____
- 5. Tests phones - talks into transmitter, listens in ear phones - (should not blow into transmitter) _____
- 6. Uses both hands to insert plug into jackbox _____
- 7. Identifies himself _____

S/P Telephone Operating Procedure:

Transmission No.

- 1. Depresses transmitter button to talk only
- 2. Places mouthpiece ½" to 1" from lips
- 3. Talks clearly
- 4. Talks loudly (normal firm voice), but does not yell
- 5. Talks slowly (120-150 wpm.)
- 6. Uses correct procedure for transmitting
- 7. Uses correct procedure for receiving
- 8. Uses correct procedure for questions
- 9. Use of correct procedure for "repeat"
- 10. If there is an error in transmission the word CORRECTION should be said twice
- 11. Used phonetic alphabet
- 12. Listens well

1	2	3	4
	—	—	—
—		—	—
—	—		—
—	—	—	
	—	—	
—			

Appendix A (continued)

	Yes (1)	No (0)
<u>Securing sound powered phones:</u>		
1. Remove plug from jack box with both hands		_____
2. Covers jack box		_____
3. Places receiver in yoke		_____
4. Coils wire (starts at jack box end and removes kinks as necessary)		_____
5. Places lead in transmitter yoke		_____
6. Unclasps neckstrap		_____
7. Makes about three turns around wire coil and receiver with neckstrap		_____
8. Connects loose end to breastplate		_____
1. Do you man sound powered phones?		
General Quarters		_____
Special Sea Detail		_____
Underway watch		_____
Other		_____
2. Did you attend sound powered telephone school? Where?		
Recruit training		_____
Pre Com Detail		_____
Other		_____

Appendix B

FOR RESEARCH PURPOSES ONLY

Supervisor's General Performance Rating Questionnaire

Man to be evaluated _____ Rate ____ Div. _____

Supervisor's Name and Rate _____

Length of time you have supervised the man _____ (in months).

Check the following items, evaluating this man in comparison to men of equal rate and length of time in the Navy.

1. In terms of ability to perform normal watchstanding duties (of rating):

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
well	below			
below average	average	about the same	better	much better

2. In terms of his ability to perform the tasks connected with his specialty rating:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
well	below			
below average	average	about the same	better	much better

3. In terms of attitude during General Quarters conditions:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
well	below			
below average	average	about the same	better	much better

4. In terms of general adaptation to Navy life and responsibilities:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
well	below			
below average	average	about the same	better	much better

5. If applicable, ability to perform messenger watch duties:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
well	below			
below average	average	about the same	better	much better

Add any remarks which you feel are appropriate. Positive or negative remarks are welcome:

REFERENCES

1. Van Matre, N. H., Harrigan, R. J., and Archibald, A. G. A Comparative Evaluation of the Group IV Personnel Assigned to the USS CATSKILL. San Diego: U. S. Naval Personnel Research Activity, August 1968. (Research Report SRR 69-7)

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13. ABSTRACT A follow-up performance evaluation was conducted on a sample of Group IV personnel who had served 14 months aboard the mine countermeasures support ship USS CATSKILL (MCS-1). Shipboard assessments were made of the Group IV sample (N=47) and the non-Group IV comparison sample (N=35) in terms of performance test proficiency, supervisors' ratings, and other variables including rate of advancement, and disciplinary records. (U) Results from the actual performance tests indicated no significant difference between samples in test task proficiency. The Group IV men did score lower on a written General Navy Knowledge Test and were rated lower than the non-Group IV personnel on two different supervisors' rating scales. The Group IV personnel experienced more disciplinary actions, completed fewer training courses, and advanced in pay grade at a slower rate than did the non-Group IV men. In general, the results of this study substantiated the trends reported in the initial CATSKILL evaluation. Considerations regarding the feasibility of shipboard utilization of Group IV personnel were presented. (U)		

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